

#1

$$A(-3, -5) \quad B(1, -4) \quad C(2, -8)$$

$$AB = \sqrt{(-3-1)^2 + (-5+4)^2}$$

$$AB = \sqrt{(-4)^2 + (-1)^2}$$

$$AB = \sqrt{17}$$

$$BC = \sqrt{(1-2)^2 + (-4+8)^2}$$

$$BC = \sqrt{(-1)^2 + (4)^2}$$

$$BC = \sqrt{17}$$

$$AC = \sqrt{(-3-2)^2 + (-5+8)^2}$$

$$AC = \sqrt{(-5)^2 + (3)^2}$$

$$AC = \sqrt{34}$$

~~Equilateral~~, isosceles, ~~scalene~~

$$AB^2 + BC^2 \stackrel{?}{=} AC^2$$

$$(\sqrt{17})^2 + (\sqrt{17})^2 \stackrel{?}{=} (\sqrt{34})^2$$

$$17 + 17 \stackrel{?}{=} 34$$

$$34 = 34 \quad \checkmark$$

Use Pythagorean
Thm to test the
angles.

Right, ~~acute~~, ~~obtuse~~